

FROM: .

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Polymer Products Dept.  
Teflon® Division  
Washington Works

863-2387

PAC

Date:

9/16

TO:

Oshon Doughty

Here's revised draft  
Thanks for your  
comments

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EID079371



E. I. DU PONT DE NEMOURS & COMPANY  
INCORPORATED  
P. O. Box 1217  
PARKERSBURG, W. VA. 26101

CC: C. G. McGlone-Tokyo  
S. Hayashi-Tokyo  
D. K. Duncan - Wilm.

POLYMER PRODUCTS DEPARTMENT

September 15, 1981

MR. S. TAKADA  
MITSUI FLUOROchemicals CO. LTD.  
MIHO 3600  
SHIMIZU  
SHIZUOKA PREFECTURE  
JAPAN

PROPOSED EMPLOYEE BLOOD SAMPLING PROGRAM

We would like to obtain blood samples from a representative group of employees at Shimizu Works to determine if there is a significant difference between C-8 APFC dispersing agent values at Shimizu and Washington Works. About twelve samples should be enough. They should include several people who work around the TEFLON® fine powder dryers because we believe that they are a major source of exposure. Your plant has batch dryers whereas Dordrecht and Washington Works have continuous dryers. We will analyze the samples at Du Pont's Experimental Station and return the results to you so that they can be given to the employees as confidential medical information.

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BACKGROUND

We have used C-8 at Washington Works for more than 25 years and in earlier years it was handled less carefully than in recent years. Limited data indicates that C-8 is persistent in the human body and we have established a program to monitor selected employees regularly. We have established engineering controls to reduce potential exposure to C-8 and required the use of protective equipment for some jobs.

Significant additional control effort began in 1979 after 3M Company(our supplier of C-8 APFC dispersing agent) advised us of accumulation of organic fluorine in the blood of some of their workers. In March, 1981, 3M Company advised us that tests indicated that oral doses of C-8 caused birth defects in rats. As a result, we transferred all females of child bearing potential from jobs with significant potential for C-8 exposure and increased our efforts to prevent exposure.

Du Pont's Haskell Laboratory is making tests to determine if exposure by inhalation of C-8 causes birth defects and also is making tests with oral doses similar to the 3M tests. We expect results of these tests in about a month. 3M Company is repeating their original study and we expect to receive some information in October, 1981.

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Samples of blood taken at Washington Works showed that polymerization operators had an average of about 5 ppm organic fluorine and the maximum value was about 29 ppm. Monomer operators and professionals generally had much lower values. We sampled some employees in the TEFLON® Division at Dordrecht Works in May, 1981, and we found that the C-8 content of their blood samples was very similar to results at Washington Works. There appears to be no background level of naturally occurring C-8 in blood samples. A thorough study of the employees health records showed no conclusive evidence of effects resulting from exposure to C-8.

We have asked Haskell Laboratory to establish an acceptable level for C-8 in workers blood that will be the basis for managing our blood monitoring programs.

We will be glad to answer any questions and provide more information that you may need.

Paul Thistleton  
Senior Engineer  
Technical Department

PT/nsw

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*mnts type only  
employee number  
not name  
initials*

PERSONAL & CONFIDENTIAL

C-8 BLOOD SAMPLING RESULTS

Births and Pregnancies

Employee  
Number

Current (12)  
PPM C-8  
in Blood  
(April 1981)

Status

Robert Eschbach	1 23566 4280	0.45
Joe Hoeg	2 50415 6466	0.28
Luella Roberts (98)	3 23300 83690	0.078
Walter Kuntz	4 23663 5874	1.5
Wally Dewese	5 23698 5490	0.013
Anna Robinson	6 30086 4352	2.5*
Dulce Eve Bailey	7 23562 9970	0.048
Brinda Lane	8 23358 9492	2.007

Normal child - born June 1980.  
Transferred out of Fluorocarbons 4/79.

Normal child - born April 1981..

Normal child - born April 1981.  
Umbilical cord blood 0.055 ppm.

~~Five months pregnant.~~ *On pregnancy leave*

~~Five months pregnant.~~ *Normal child - born August 1981*

Child - 2 plus years.  
Unconfirmed eye and tear duct defect.

Child - 4 months.  
One nostril and eye defect.

*Babies blood 0.012ppm*  
*Normal child - born July 1981*

\*Current blood level - in fluorocarbons area only one month  
before pregnancy.

RDI:1dr

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